

IN THE CLAIMS:

The status of each claim that has been introduced in the above-referenced application is identified in the ensuing listing of the claims. This listing of the claims replaces all previously submitted claims listings.

1-9. (canceled)

10. (Currently amended) A semiconductor device assembly comprising:
a substrate;
at least one semiconductor device secured to ~~said~~ the substrate; and
a polymeric film separate from ~~said~~ the substrate and positioned at least partially over at least one of ~~said~~ the substrate and ~~said~~ the at least one semiconductor device, ~~said~~ the polymeric film carrying at least one conductive trace in communication with at least one of a terminal of ~~said~~ the substrate and a bond pad of ~~said~~ the at least one semiconductor device, the polymeric film and the at least one conductive trace extending through a plane of the substrate.

11. (Currently amended) The assembly of claim 10, wherein ~~said~~ the polymeric film is at least partially superimposed over ~~said~~ the at least one semiconductor device.

12. (Currently amended) The assembly of claim 11, wherein ~~said~~ the at least one conductive trace at least partially establishes communication between ~~said~~ the bond pad of ~~said~~ the at least one semiconductor device and a corresponding terminal of ~~said~~ the substrate.

13. (Currently amended) The assembly of claim 12, wherein communication between ~~said~~ the bond pad and ~~said~~ the corresponding terminal is further established by at least one discrete conductive element positioned electrically between ~~said~~ the at least one conductive trace and at least one of ~~said~~ the bond pad and ~~said~~ the corresponding terminal.

14. (Currently amended) The assembly of claim 10, comprising a plurality of semiconductor devices at different locations on ~~said~~ the substrate.

15. (Currently amended) The assembly of claim 14, wherein ~~said~~ the polymeric film is secured to ~~said~~ the substrate laterally between at least two semiconductor devices of ~~said~~ the plurality of semiconductor devices.

16. (Currently amended) The assembly of claim 15, wherein at least one conductive trace carried by ~~said~~ the polymeric film at least partially establishes communication between a bond pad of one of ~~said~~ the at least two semiconductor devices and a corresponding bond pad of another of ~~said~~ the at least two semiconductor devices.

17. (Currently amended) The assembly of claim 16, wherein ~~said~~ the at least one conductive trace communicates with a terminal of ~~said~~ the substrate which, in turn, communicates with ~~said~~ the bond pad.

18. (Currently amended) The assembly of claim 17, further comprising discrete conductive elements between ~~said~~ the terminal and each of ~~said~~ the at least one conductive trace and ~~said~~ the bond pad.

19. (Currently amended) The assembly of claim 10, wherein ~~said~~ the substrate comprises at most four conductive layers.

20. (Currently amended) The assembly of claim 10, wherein ~~said~~ the at least one conductive trace provides a more direct electrical route than any conductive trace carried by ~~said~~ the substrate.

21. (Currently amended) The assembly of claim 16, wherein another bond pad of ~~said~~ the at least one semiconductor device is in communication with at least a terminal of ~~said~~ the substrate by way of another conductive trace carried by ~~said~~ the polymeric film.

22. (canceled)

23. (Withdrawn and currently amended) The assembly of claim ~~22~~10, wherein opposite ends of ~~said~~ the at least one conductive trace are electrically exposed at opposite sides of ~~said~~ the polymeric film.

24. (Currently amended) The assembly of claim ~~22~~10, wherein opposite ends of ~~said~~ the at least one conductive trace are electrically exposed at the same side of ~~said~~ the polymeric film.

25. (Currently amended) A carrier for at least one semiconductor device, comprising:
a substrate carrying at least one terminal and at least one conductive trace; and
a polymeric film separate from ~~said~~ the substrate, positioned at least partially over ~~said~~ the substrate, and carrying at least one additional conductive trace.

26. (Currently amended) The carrier of claim 25, wherein ~~said~~ the substrate comprises at most four conductive layers.

27. (Currently amended) The carrier of claim 25, wherein ~~said~~ the polymeric film is at least partially adhered to ~~said~~ the substrate.

28. (Currently amended) The carrier of claim 27, wherein ~~said~~ the at least one additional conductive trace at least partially establishes communication between ~~said~~ the at least one terminal and another terminal carried upon ~~said~~ the substrate.

29. (Currently amended) The carrier of claim 28, wherein communication between ~~said~~ the at least one terminal and ~~said~~ the another terminal is further established by way of at least one discrete conductive element that electrically connects ~~said~~ the at least one additional conductive trace to at least one of ~~said~~ the at least one terminal and ~~said~~ the another terminal.

30. (Currently amended) The carrier of claim 25, wherein ~~said~~ the polymeric film is configured to be disposed at least partially over the at least one semiconductor device carried by ~~said~~ the substrate.

31. (Currently amended) The carrier of claim 25, wherein ~~said~~ the at least one additional conductive trace carried upon ~~said~~ the polymeric film is configured to at least partially establish communication between ~~said~~ the at least one terminal and a corresponding bond pad of the at least one semiconductor device.

32. (Currently amended) The carrier of claim 31, wherein communication between ~~said~~ the at least one terminal and ~~said~~ the corresponding bond pad is further established by way of at least one discrete conductive element electrically connecting ~~said~~ the at least one additional conductive trace to at least one of ~~said~~ the at least one terminal and ~~said~~ the corresponding bond pad.

33. (Currently amended) The carrier of claim 31, wherein ~~said~~ the at least one additional conductive trace carried upon ~~said~~ the polymeric film is configured to at least partially establish communication between a bond pad of the at least one semiconductor device and a corresponding bond pad of at least another semiconductor device carried by ~~said~~ the substrate.

34. (Currently amended) The carrier of claim 33, wherein communication between ~~said~~ the bond pad and ~~said~~ the corresponding bond pad is further established by way of at least

one discrete conductive element electrically connecting ~~said~~ the at least one additional conductive trace and at least one of ~~said~~ the bond pad and ~~said~~ the corresponding bond pad.

35. (Currently amended) The carrier of claim 25, wherein ~~said~~ the substrate includes at least one aperture formed therethrough for receiving a portion of ~~said~~ the polymeric film and ~~said~~ the at least one additional conductive trace to facilitate positioning of different portions of ~~said~~ the polymeric film over portions of opposite sides of ~~said~~ the substrate.

36. (Withdrawn and currently amended) The carrier of claim 35, wherein opposite ends of ~~said~~ the at least one additional conductive trace are electrically exposed at opposite sides of ~~said~~ the polymeric film.

37. (Currently amended) The carrier of claim 35, wherein opposite ends of ~~said~~ the at least one additional conductive trace are electrically exposed at the same side of ~~said~~ the polymeric film.

38-58. (canceled)

59. (Currently amended) A semiconductor device assembly, comprising:
a substrate carrying a first plurality of conductive traces;
a routing element separate from ~~said~~ the substrate and carrying a second plurality of conductive traces positioned at least partially on ~~said~~ the substrate; and
at least one semiconductor device secured to ~~said~~ the substrate.

60. (Currently amended) The assembly of claim 59, wherein ~~said~~ the routing element is at least partially superimposed over ~~said~~ the at least one semiconductor device.

61. (Currently amended) The assembly of claim 60, wherein at least one conductive trace of ~~said~~ the second plurality of conductive traces at least partially establishes electrical communication between a bond pad of ~~said~~ the at least one semiconductor device and a corresponding terminal of ~~said~~ the substrate.

62. (Currently amended) The assembly of claim 61, wherein communication between ~~said~~ the bond pad and ~~said~~ the corresponding terminal is further established by at least one discrete conductive element positioned electrically between ~~said~~ the at least one conductive trace and at least one of ~~said~~ the bond pad and ~~said~~ the corresponding terminal.

63. (Currently amended) The assembly of claim 59, comprising a plurality of semiconductor devices at different locations on ~~said~~ the substrate.

64. (Currently amended) The assembly of claim 63, wherein ~~said~~ the routing element is secured to ~~said~~ the substrate laterally between at least two semiconductor devices of ~~said~~ the plurality of semiconductor devices.

65. (Currently amended) The assembly of claim 64, wherein at least one conductive trace of ~~said~~ the second plurality of conductive traces at least partially establishes communication between a bond pad of one of ~~said~~ the at least two semiconductor devices and a corresponding bond pad of another of ~~said~~ the at least two semiconductor devices.

66. (Currently amended) The assembly of claim 65, wherein ~~said~~ the at least one conductive trace communicates with a terminal of ~~said~~ the substrate which, in turn, communicates with ~~said~~ the bond pad.

67. (Currently amended) The assembly of claim 66, further comprising discrete conductive elements between ~~said~~ the terminal and each of ~~said~~ the at least one conductive trace and ~~said~~ the bond pad.

68. (Currently amended) The assembly of claim 59, wherein ~~said~~ the substrate comprises at most four conductive layers.

69. (Currently amended) The assembly of claim 59, wherein ~~said~~ the second plurality of conductive traces of ~~said~~ the routing element provide a more direct electrical route than any conductive trace carried by ~~said~~ the substrate.

70. (Currently amended) The assembly of claim 65, wherein another bond pad of ~~said~~ the at least one semiconductor device is in communication with at least a terminal of ~~said~~ the substrate by way of another conductive trace of ~~said~~ the second plurality of conductive traces.

71. (Currently amended) The assembly of claim 59, wherein ~~said~~ the routing element and ~~said~~ the second plurality of conductive traces extends through a plane of ~~said~~ the substrate.

72. (Currently amended) The assembly of claim 71, wherein opposite ends of at least one conductive trace of ~~said~~ the second plurality of conductive traces are electrically exposed at opposite sides of ~~said~~ the routing element.

73. (Withdrawn and currently amended) The assembly of claim 71, wherein opposite ends of at least one conductive trace of ~~said~~ the second plurality of conductive traces are electrically exposed at the same side of ~~said~~ the routing element.

74. (Currently amended) A semiconductor device assembly, comprising:
a substrate carrying a first plurality of conductive traces;

a routing element carrying a second plurality of conductive traces positioned at least partially on ~~said the~~ substrate; and
a plurality of semiconductor devices secured to ~~said the~~ substrate at different locations thereon.

75. (Currently amended) The assembly of claim 74, wherein ~~said the~~ routing element is secured to ~~said the~~ substrate laterally between at least two semiconductor devices of ~~said the~~ plurality of semiconductor devices.

76. (Currently amended) The assembly of claim 75, wherein at least one conductive trace of ~~said the~~ second plurality of conductive traces at least partially establishes communication between a bond pad of one of ~~said the~~ at least two semiconductor devices and a corresponding bond pad of another of ~~said the~~ at least two semiconductor devices.

77. (Currently amended) The assembly of claim 76, wherein ~~said the~~ at least one conductive trace communicates with a terminal of ~~said the~~ substrate which, in turn, communicates with ~~said the~~ bond pad.

78. (Currently amended) The assembly of claim 77, further comprising discrete conductive elements between ~~said the~~ terminal and each of ~~said the~~ at least one conductive trace and ~~said the~~ bond pad.

79. (Currently amended) The assembly of claim 76, wherein another bond pad of ~~said the~~ at least one semiconductor device is in communication with at least a terminal of ~~said the~~ substrate by way of another conductive trace of ~~said the~~ second plurality of conductive traces.

80. (Currently amended) A semiconductor device assembly, comprising:
a substrate carrying a first plurality of conductive traces, ~~said the~~ substrate comprising, at most, four conductive layers;

a routing element carrying a second plurality of conductive traces positioned at least partially on ~~said the~~ substrate; and
at least one semiconductor device secured to ~~said the~~ substrate.

81. (Currently amended) The assembly of claim 80, wherein ~~said the~~ second plurality of conductive traces of ~~said the~~ routing element provide a more direct electrical route than any conductive trace carried by ~~said the~~ substrate.

82. (Currently amended) The assembly of claim 80, wherein ~~said the~~ routing element and ~~said the~~ second plurality of conductive traces extends through a plane of ~~said the~~ substrate.

83. (Currently amended) The assembly of claim 82, wherein opposite ends of at least one conductive trace of ~~said the~~ second plurality of conductive traces are electrically exposed at opposite sides of ~~said the~~ routing element.

84. (New) A semiconductor device assembly comprising:
a substrate;
at least one semiconductor device secured to the substrate; and
a polymeric film separate from the substrate, at least partially superimposed over the at least one semiconductor device, and positioned at least partially over at least one of the substrate and the at least one semiconductor device, the polymeric film carrying at least one conductive trace in communication with at least one of a terminal of the substrate and a bond pad of the at least one semiconductor device.

85. (New) the assembly of claim 84, wherein the at least one conductive trace at least partially establishes communication between the bond pad of the at least one semiconductor device and a corresponding terminal of the substrate.

86. (New) The assembly of claim 85, wherein communication between the bond pad and the corresponding terminal is further established by at least one discrete conductive element positioned electrically between the at least one conductive trace and at least one of the bond pad and the corresponding terminal.

87. (New) The assembly of claim 84, comprising a plurality of semiconductor devices at different locations on the substrate.

88. (New) The assembly of claim 87, wherein the polymeric film is secured to the substrate laterally between at least two semiconductor devices of the plurality of semiconductor devices.

89. (New) The assembly of claim 88, wherein at least one conductive trace carried by the polymeric film at least partially establishes communication between a bond pad of one of the at least two semiconductor devices and a corresponding bond pad of another of the at least two semiconductor devices.

90. (New) The assembly of claim 89, wherein the at least one conductive trace communicates with a terminal of the substrate which, in turn, communicates with the bond pad.

91. (New) The assembly of claim 90, further comprising discrete conductive elements between the terminal and each of the at least one conductive trace and the bond pad.

92. (New) The assembly of claim 84, wherein the substrate comprises at most four conductive layers.

93. (New) The assembly of claim 84, wherein the at least one conductive trace provides a more direct electrical route than any conductive trace carried by the substrate.

94. (New) The assembly of claim 89, wherein another bond pad of the at least one semiconductor device is in communication with at least a terminal of the substrate by way of another conductive trace carried by the polymeric film.

95. (New) The assembly of claim 84, wherein the polymeric film and the at least one conductive trace extend through a plane of the substrate.

96. (New) The assembly of claim 84, wherein opposite ends of the at least one conductive trace are electrically exposed at opposite sides of the polymeric film.

97. (New) The assembly of claim 84, wherein opposite ends of the at least one conductive trace are electrically exposed at the same side of the polymeric film.

98. (New) A semiconductor device assembly comprising:
a substrate;
a plurality of semiconductor devices at different locations on the substrate; and
a polymeric film separate from the substrate, secured to the substrate laterally between at least two semiconductor devices of the plurality of semiconductor devices, and positioned at least partially over at least one of the substrate and the at least one semiconductor device, the polymeric film carrying at least one conductive trace in communication between a bond pad of one of the at least two semiconductor devices and terminal of the substrate, which, in turn, communicates with the bond pad.

99. (New) The assembly of claim 98, wherein the polymeric film is at least partially superimposed over the at least one semiconductor device.

100. (New) The assembly of claim 99, wherein the at least one conductive trace at least partially establishes communication between the bond pad of the at least one semiconductor device and a corresponding terminal of the substrate.

101. (New) The assembly of claim 100, wherein communication between the bond pad and the corresponding terminal is further established by at least one discrete conductive element positioned electrically between the at least one conductive trace and at least one of the bond pad and the corresponding terminal.

102. (New) The assembly of claim 98, further comprising discrete conductive elements between the terminal and each of the at least one conductive trace and the bond pad.

103. (New) The assembly of claim 98, wherein the substrate comprises at most four conductive layers.

104. (New) The assembly of claim 98, wherein the at least one conductive trace provides a more direct electrical route than any conductive trace carried by the substrate.

105. (New) The assembly of claim 98, wherein another bond pad of the at least one semiconductor device is in communication with at least a terminal of the substrate by way of another conductive trace carried by the polymeric film.

106. (New) The assembly of claim 98, wherein the polymeric film and the at least one conductive trace extend through a plane of the substrate.

107. (New) The assembly of claim 98, wherein opposite ends of the at least one conductive trace are electrically exposed at opposite sides of the polymeric film.

108. (New) The assembly of claim 98, wherein opposite ends of the at least one conductive trace are electrically exposed at the same side of the polymeric film.

109. (New) A semiconductor device assembly comprising:
a substrate;
comprising a plurality of semiconductor devices at different locations on the substrate; and
a polymeric film separate from the substrate, secured to the substrate laterally between at least two semiconductor devices of the plurality of semiconductor devices, and positioned at least partially over at least one of the substrate and the at least one semiconductor device, the polymeric film carrying at least one conductive trace in communication between a bond pad of one of the at least two semiconductor devices and a corresponding bond pad of another of the at least two semiconductor devices, another bond pad of the at least one semiconductor device in communication with at least a terminal of the substrate by way of another conductive trace carried by the polymeric film.

110. (New) The assembly of claim 109, wherein the polymeric film is at least partially superimposed over the at least one semiconductor device.

111. (New) The assembly of claim 110, wherein the at least one conductive trace at least partially establishes communication between the bond pad of the at least one semiconductor device and a corresponding terminal of the substrate.

112. (New) The assembly of claim 111, wherein communication between the bond pad and the corresponding terminal is further established by at least one discrete conductive element positioned electrically between the at least one conductive trace and at least one of the bond pad and the corresponding terminal.

113. (New) The assembly of claim 109, wherein the at least one conductive trace communicates with a terminal of the substrate which, in turn, communicates with the bond pad.

114. (New) The assembly of claim 113, further comprising discrete conductive elements between the terminal and each of the at least one conductive trace and the bond pad.

115. (New) The assembly of claim 109, wherein the substrate comprises at most four conductive layers.

116. (New) The assembly of claim 109, wherein the at least one conductive trace provides a more direct electrical route than any conductive trace carried by the substrate.

117. (New) The assembly of claim 109, wherein the polymeric film and the at least one conductive trace extend through a plane of the substrate

118. (New) The assembly of claim 109, wherein opposite ends of the at least one conductive trace are electrically exposed at opposite sides of the polymeric film.

119. (New) The assembly of claim 109, wherein opposite ends of the at least one conductive trace are electrically exposed at the same side of the polymeric film.